Patent claims

1. A DNA sequence coding for a spliceosomal protein having the function of the 35kD protein associated with the U11/U12 snRNP complex of the AT-AC spliceosome, which sequence is selected from the group comprising

   a) DNA sequences which encode a protein having the amino acid sequence according to SEQ ID No. 18;

   b) DNA sequence according to a), comprising the nucleotide sequence according to SEQ ID No. 17;

   c) DNA sequences which hybridize with the sequences complementary to the sequences under a) and are capable of encoding a protein having the functional properties of the 35 kD protein of the U11/12 snRNP complex; and

   d) DNA sequences whose genetic code is degenerated with respect to the sequences mentioned under a) or c);

   and fragments of said sequences and the sequences complementary to the sequences mentioned under a), b), c) and d) or the fragments thereof.

2. A recombinant DNA molecule comprising a DNA sequence as claimed in claim 1.

3. The recombinant DNA molecule as claimed in claim 2, wherein the DNA coding for the spliceosomal protein is linked to regulatory sequences which make expression of the protein in prokaryotic or eukaryotic cells possible.

4. A vector comprising a sequence as claimed in claim 1 or a recombinant DNA molecule as claimed in either of claims 2 and 3.

5. A host organism, except a human, comprising a recombinant DNA molecule as claimed in either of claims 2 and 3 or a vector as claimed in claim 4.

6. The host organism as claimed in claim 5, which is a prokaryotic microorganism.

7. The host organism as claimed in claim 5, which is a eukaryotic microorganism.

8. A spliceosomal protein having the function of the 35kD protein associated with the U11/U12 snRNP complex of the U12 spliceosome, which spliceosomal protein is encoded by any of the sequences as claimed in claim 1.

9. The spliceosomal protein as claimed in claim 8, selected from the group comprising

a) a polypeptide having the amino acid sequence according to SEQ ID No. 18;

b) a polypeptide which, in comparison with the sequence as claimed in a), has one or more amino acid deletions, amino acid exchanges, amino acid additions and/or amino acid insertions.

10. The use of a DNA sequence as claimed in claim 1 or of a fragment thereof for isolating homologous DNA sequences or RNA sequences.

11. The use of a spliceosomal protein as claimed in claim 8 for finding splicing modulators.

12. A pharmaceutical comprising a nucleic acid as claimed in any of claims 1 to 3 and/or a spliceosomal protein as claimed in either of claims 8 and 9 and, where appropriate, pharmaceutically acceptable additives and/or excipients.

13. A process for producing a pharmaceutical for the treatment of cancer, autoimmune diseases, in particular Grave's disease, spinal muscular atrophy, β'-thalassemia, cancers related to the c-erb oncogene, hepatitis C infection, herpes simplex virus infection, systemic lupus erythematosus, Hermansky-Pudlak syndrome, which comprises formulating a nucleic acid as claimed in any of claims 1 to 3 and/or a spliceosomal protein as claimed in either of claims 8 and 9 together with a pharmaceutically acceptable additive and/or excipient.

14. A diagnostic agent comprising nucleic acid as claimed in any of claims 1 to 3 and/or a spliceosomal protein as claimed in either of claims 8 and 9 and, where appropriate, pharmaceutically acceptable additives and/or excipients.

15. A process for producing a diagnostic agent for diagnosis of Grave's disease, spinal muscular atrophy, β'-thalassemia, cancers related to the c-erb oncogene, hepatitis C infection, herpes simplex virus infection, systemic lupus erythematosus, Hermansky-Pudlak syndrome, which comprises adding a pharmaceutically acceptable carrier to a nucleic acid as claimed in any of claims 1 to 3 and/or a spliceosomal protein as claimed in either of claims 8 and 9.